

Torside Building Consultants Limited
Suite 4 Marple House
39 Stockport Road
Stockport
Greater Manchester
SK6 6BD

Date: 1/5/2025

For the attention of Mr Jason Wadsworth

Re: Specification for 37 Cross Street Manchester Flat Roof
Project Number: 10142317

This specification is provided from information supplied to me by Torside Building Consultants on 29th April 2025 and is not based on a site visit by a BMI Icopal representative. BMI Group UK Ltd. can not be held liable for the sufficiency of the information provided to us. Any changes to the information contained herein must be confirmed prior to any roofing works commencing as the specification may need to be revised.

The following specification would be covered by our BMI Group UK Ltd Insured System Guarantee Scheme for a period of 20 years provided that the work is carried out by a BMI Group UK Ltd. approved Roofing Contractor and is subject to the guarantee offer enclosed within the specification and the guarantee terms and conditions.

The BMI Icopal roof system specified when installed in accordance with this specification, BMI Icopal installation instructions and relevant industry standards has been tested at an independently accredited laboratory to demonstrate it can achieve an external fire classification of BROOF(t4) to BS EN 13501-5 when tested in accordance with DD CEN/TS 1187. Note, BMI UK & Ireland follows the industry-accepted principle that where a roof system is tested on an 18mm OSB3 deck this is seen as the worst-case scenario i.e. a change to any of the following decks does not affect the tested performance: 18mm plywood, 0.7mm gauge profiled steel deck or a non-combustible deck thicker than 10mm. Please contact BMI Technical Services for further information or if you have a deck that does not fit these criteria.

The roof areas indicated in this specification are approximate and should only be used as a guide. For accurate tendering purposes the client or contractor should confirm the exact areas.

I trust this specification is of assistance to you. If I can be of further help on this, or any other project, please do not hesitate to contact me on 07970455073.

Yours sincerely



Paul Seel
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Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
Project Ref: 10142317



FLAT ROOFING SPECIFICATION



PROJECT ADDRESS:

PROJECT NAME: 37 Cross Street Manchester Flat Roof
CITY: Manchester
POSTCODE: M2 4JE
DATE PREPARED: 01/05/2025

CLIENT

PREPARED ON BEHALF OF: Torside Building Consultants Limited

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Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
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1. INTRODUCTION

The specification provided below is not exhaustive. The purpose/extent of the enclosed specification is to provide an indicative outline of the products and application processes required to complete a successful BMI Icopal flat roof waterproofing system. **It is not the intent of this specification to provide step by step guidance covering all aspects and issues that may be relevant to the installation on the specific project.**

BMI Group UK Limited is committed to continually enhancing and improving our product range. We reserve the right to change products and specifications without notice albeit advanced notice of product withdrawals or replacements will be given where reasonably practicable. We recommend the BMI Icopal approved roofing contractor confirms product availability with a local BMI Group UK Limited flat roofing representative in advance of entering into any contracts based on this specification. If any aspects are revised prior to commencement of the construction please contact BMI Group UK Limited to review the specification and to amend or update the information provided.

Installers must follow BMI Group UK Limited installation guidance (available at <https://www.bmigroup.com/uk/bmi-icopal/>) and should contact BMI Group UK Limited Technical Services department as required.

For areas where 'Safe2Torch' is required please refer to the accompanying BMI Group UK Limited Site Survey (where applicable). It is the roofing contractor's responsibility to assess all hazards and health and safety issues associated with work on combustible substrates and to take appropriate steps and precautions in respect of any risk involved in the proposed roofing works implementation. For further guidance visit www.NFRC.co.uk/safe2torch

Any unauthorized changes made to this specification as originally issued by BMI Group UK Limited shall render it invalid.

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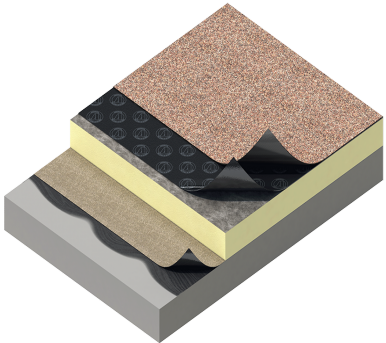


2. CONTACT DETAILS

Client Details	
Client Company Name	Torside Building Consultants Limited
Client Address	Suite 4 Marple House 39 Stockport Road Stockport Greater Manchester SK6 6BD
Contact Name	0002 Jason Wadsworth
Tel	
Email	jason@torside.co.uk
Project Details	
Site Name	37 Cross Street Manchester Flat Roof
Site Address	Cross Street Manchester M2 4JE
Icopal Contacts	
Name	Paul Seel
Position	Area Technical Manager
Tel	07970 455 073
Email	paul.seel@bmigroup.com
Head Office	Icopal Limited BMI House 2 Pitfield, Kiln Farm Milton Keynes MK11 3LW
Tel	01908 015760

3. SPECIFICATION SUMMARY

Roof Area Reference	37 Cross Street Manchester Flat Roof
Roof Area(m2)	3
Deck	Cast Concrete
Substrate	Existing Finished Concrete
Primer	BMI Icopal S.A. Primer (Pour)
Vapour Control Layer	TorchSafe T.A. VCL - Sanded
Adhesive	BMI Icopal Insulation Spray Adhesive
Packerboard	Not Required
Insulation	Thermazone Roofboard 130mm
Baselayer	Not Required
Underlay Primer	BMI Icopal S.A. Primer (Pour)
Underlay	TorchSafe T.A. Detailing Underlay
Capsheet	FireSmart T.A. Detailing Mineral Capsheet
Type of System	HEATACTIVE



4. PRELIMINARIES

1 - Health and Safety

Prior to commencement of works, all involved parties should consult the Asbestos Register from the building owners/duty holder. If asbestos based materials are present, all work must be carried out strictly in accordance with all current guidelines provided by the Health and Safety Executive, Local Authority and any other official organisation concerned with the project.

In the preparation of this technical specification and subsequent advice, BMI Group UK Limited understands its responsibility as an (additional) designer under the requirements of the current issue of The Construction (Design & Management) Regulations. As a result, we have made every effort to obtain all relevant information by way of site survey and client consultation in preparing this document. It is assumed that the client has also carried out their legal duties with regard to the The Construction (Design & Management) regulations and other associated health and safety legislation. Further information may be obtained from <https://www.hse.gov.uk/construction/cdm/2015/index.htm>

All work must comply with the requirements of the Health & Safety at Work Act and any additional project requirements.

The Work at Height Regulations 2005 apply to all work at height where there is a risk of a fall liable to cause personal injury. They place duties on employers, the self-employed and any person who controls work of others (e.g. facilities managers or building owners) to the extent that they control the work. The Construction (Design and Management) Regulations 2015 states that it is the responsibility of the employer to ensure that any employee required to work at height must be suitably trained and protected from any potential fall hazards. These regulations have been made to prevent the deaths and injuries caused each year by falls at work. A place is "at height" if (unless these regulations are followed) a person could be injured falling from it, even if it is at or below ground level. Therefore, in line with Health and Safety Executive (HSE) codes of practice, adequate fall protection must be provided where access is required to a roof area. This could be for maintenance, inspection, repair work or retro-fitting of plant equipment. Employees have general legal duties to take reasonable care of themselves and others who may be affected, and to cooperate with their employer to enable their health and safety duties and requirements to be complied with.

It is the contractors' responsibility to liaise with the client or building owner to identify any potential hazards that could affect safe working practices (eg. hazardous gases, noxious fumes, flammable fumes, transmitters and microwaves etc.).

Roofing products can be heavy. The contractor should ensure the correct control measures should be implemented to protect operatives and minimise risk when moving materials. Care should also be taken to avoid excessive point loading when storing and loading materials on a roof.

All material safety data sheets relating to BMI Icopal products are available on the company website or upon request from the BMI Technical Services Department.

It is the responsibility of the contractor to alert the client or building owner to the possibility of noise likely associated with roofing works prior to the start of works

Provision should be made to minimise or eliminate the risk of fumes or smoke from the roofing works entering the building by air intakes, doors and windows. The contractor should agree a plan of work with the building owner prior to commencement.

4. PRELIMINARIES - CONTINUED

1 - Health and Safety

Consideration must be given to working in adverse or windy conditions and the guidance in HSE publication HSG33 'Health and Safety in Roofwork' must be followed. Additional guidance provided by the NFRC in the document "Roofing and Cladding in Windy Conditions" is also available.

If solvent based products are included in this specification provision should be made for the safe storage of these products in a secure, well ventilated, flame proof, locked, protected storage area out of the weather. To minimise the risk associated with these products refer to the information provided within the relevant BMI Icopal material safety data sheets and product packaging. When working in confined spaces all relevant regulations should be followed. Consideration should be given to the proximity of air intakes, windows and doors during the application of solvent based products.

Where the specification calls for the removal of lead, strict adherence to the current 'Control of Lead at Work Regulations' and supporting Approved Code of Practice should be observed. Where lead-free replacement flashings are required BMI Icopal FormFlash should be used.

Appropriate PPE should be worn by operatives when cutting chases into masonry and concrete using hand or power tools.

BMI Icopal are signatories to the Safe2Torch guidance and therefore recommend that safe practices set out in the NFRC guidance document are followed where applicable. Guidance on hot works and roofing equipment is available from the NFRC - "Guidance - For the safe installation of torch-on reinforced bitumen membranes and use of gas torches in the workplace".

<https://www.nfrc.co.uk/docs/default-source/health-and-safety-guidance-publications/safe2torch-guidance.pdf>

Appropriate health and safety precautions should be adopted to minimise risk when using hot bitumen for roofing works. Information relating to the use of hot liquid bitumen can be found in the following publications: LRWA - Hot Melt Code of Practice Specification and Use of Hot Melt Monolithic Waterproofing Systems for Roofs, Balconies and Walkways <https://www.lrwa.org.uk/wp-content/uploads/2015/07/LRWA-Hot-Melt-Code-of-Practice.pdf>. UKLPG Codes of Practice - COP 4; Recommendations for the Safe and Satisfactory Operation of Thermoplastic and Bitumen Boilers, Mastic Asphalt Cauldrons and Mixers, Hard Tools and similar Equipment. 2004. <https://www.wlpga.org/>.

It is the client or building owner's responsibility to provide safe access and egress in line with Health and Safety Executive codes of practice, for personnel carrying out roof works or maintenance. Provision of adequate fall protection must be provided during installation, maintenance, inspection, repair work or retro-fitting of plant equipment. This should be considered at the design stage. Further information regarding protection can be found in the current version of HSG33 - Health and safety in roof work.

2 - Roofing Contractor

All dimensions given in the enclosed documents and drawings are approximate and the roofing contractor must either examine the buildings on site or consult with the lead designer to ascertain the full extent of the works required ensuring dimensions are correct before preparing a tender.

Before commencement of any roofing works the roofing contractor must visit the site and fully acquaint himself with all aspects of the site and scope of work whether explicitly referred to in the specification or not, they must also satisfy themselves as to the facilities including access, storage of materials, plant, welfare and other site conditions.

4. PRELIMINARIES - CONTINUED

2 - Roofing Contractor

It is the responsibility of the contractor to familiarise themselves with all current relevant regulations and appropriate supporting documents, such as Approved Documents, Technical Handbooks and Technical Booklets. The contractor must follow all current codes of practice with particular note to Regulation 7 - Materials and Workmanship, and BMI installation guidance. BMI Group UK Limited take no responsibility for the lack of knowledge of third parties.

The contractor shall ensure the surfaces to receive the specified works are acceptable and conform to the requirements of the specification. All surfaces must be free from solvents, hydrocarbons or any other incompatible materials.

Any works which may affect the client concerning the temporary disruption or suspension of existing services to the building during the works must be notified to them with sufficient notice.

The contractor shall co-ordinate all works to ensure the integrity of the roofing system is not compromised during installation. Works conducted during adverse weather conditions shall be suspended unless suitable temporary protection can be provided.

The contractor shall ensure that the decking materials and sub layers are dry prior to the application of the waterproofing system to prevent blistering, moisture entrapment, excessive movement and adhesion failure.

All roofing work must be left secure at the end of each working day and equipment must be left safe at the end of each work period.

It is the responsibility of the contractor to ensure that the building remains watertight at all times. Areas of existing waterproofing removed within a single day should be done so ensuring the provision of appropriate night joints.

The contractor should make adequate provision for the safe removal and disposal of all associated waste, including the existing waterproofing system if the roof is to be stripped

Suitable night joints should be formed at the end of each working day to provide a temporary waterproofing seal to the new installation. Materials used to create the joint which do not form part of the specified system shall be removed prior to continuation of the works.

Upon completion of the primary waterproofing works, the integrity of the waterproofing must be independently electronically leak tested (ELD) before any ballast, insulation, surface finishes or other items are placed above the waterproofing and submitted to BMI Group Ltd. Technical Services Department for acceptance and approval. If the third party leak detection survey confirms the presence of any punctures/defects these must be repaired prior to covering and subsequently re-tested and re-inspected by BMI. Please note that any guarantees will not be issued without a valid BMI inspection and valid ELD test certificate.

3 - Drainage

Temporary ponding of water on the specified waterproofing membranes will have no detrimental effect on the integrity of the waterproofing system, provided it has been installed in accordance with the specification. BMI Icopal waterproofing membranes have the capacity to accommodate the additional stresses imposed on the membranes by temporary ponding, however, we recommend that all guidance in accordance with the current revisions of BS 6229, BS 8217, SPRA, the LRWA, NFRC, LABC, and NHBC is followed to avoid ponding wherever possible. In the event of ponded areas, additional roof maintenance in addition to the normal requirements of the BMI Icopal care and maintenance manual will be required to regularly clear leaves, silt or other debris from these roof areas.

4. PRELIMINARIES - CONTINUED

3 - Drainage

Ponding water may have the following negative effects on the finished flat roof.

- Potential increased water loading on the structure, which should be taken into account.
- The aesthetics may be affected with the increased risk of membrane staining, algae, moss and insect infestations.
- There are potential health and safety concerns that may also arise such as odour/hygiene and a slip risk especially in freezing conditions.
- If the waterproofing membrane is penetrated in an area where ponding water forms there is a high risk of a leak.

Temporary ponding water will not affect the BMI Group UK Limited guarantee for the project. BMI Group UK Ltd. consider temporary to be a period within 48 hours after rainfall.

Inspect and test all rainwater goods including downpipes to ensure free drainage. Bring defects to the attention of the Client and agree remedial action prior to further works.

4 - Preparation

Electrical or mechanical work to existing plant or equipment must be carried out by competent and qualified professionals and any advice followed.

All preparatory works including alterations must be complete and satisfactory prior to the commencement of the installation of the specified waterproofing system.

It is the roofing contractors responsibility to ensure that all surfaces to receive the following specification are acceptable and conform to the necessary requirements.

5 - Application

The roofing contractor should ensure that all BMI Icopal materials are stored and installed within the temperature parameters stated in the relevant product datasheet and installation guidance.

If the reader of this document finds that there is a conflict of information please contact BMI Technical Services Department prior to the commencement of works for further advice.

This specification including any drawings or calculations should be read in conjunction with any relevant Architect or Specifier information. Any discrepancies should be highlighted to all parties in writing immediately.

Ensure that from completion of the waterproofing the roof is not used as a working platform unless fully protected to the satisfaction of the roofing contractor and BMI Icopal site inspectors. No paint, solvents, hydrocarbon volatile substances; or other substances which may be detrimental to the waterproofing membrane should come into contact with the waterproofing membrane. No sharp or abrasive materials should be allowed to come into contact with the completed waterproofing membrane.

Timber used as part of the roofing works should be treated structural softwood timber that meets, is used and is installed in accordance with the current version of "BS EN-1995-1-1". All timber used for flat roofing should be "Use Class 2" in accordance with the current version of "BS EN 335"

4. PRELIMINARIES - CONTINUED

5 - Application

A completed flat roofing project must achieve across the whole area a minimum fall of 1:80 as per BS 6229-2018. All flat roof surfaces (including internal gutters) should be designed to a fall of 1:40 to ensure finished fall of 1:80 is achieved. The design must take account of construction tolerances, permitted deviations and deflection under loading and deflection/settlement. The design of the falls must also take into account the point at which two areas of falls intersect. A minimum finished fall of 1:80 along is required along the intersection.

Following completion of the specified roofing works, provision should be given to the protection of all finished waterproofing surfaces from damage by any subsequent trades that require access to the roof area. Additional work by the roofing contractor may be required to return the membrane to a warrantable condition if the membrane is damaged due to inadequate protection.

The building structure must be of sound condition and capable of accepting the imposed loading of the new roofing system and associated installation procedures. It is the responsibility of the building owner/duty holder's to determine whether a Third party structural assessment should be conducted prior to works commencing. Please note if required this is the building owner/duty holder's responsibility to arrange and provide results to all relevant parties.

Any issues found that may affect the future performance of the specified system shall be reported to the client and BMI Icopal at the earliest possible opportunity.

The roof should comply with all relevant requirements governing the conservation of fuel and power and limiting carbon emissions, including, but not limited to, the guidance set out in Approved Document L (England & Wales), Technical Handbook - Section 6 Energy (Scotland), or Technical Standards F (Northern Ireland). Confirmation of individual project requirements should be confirmed to BMI Icopal by the principle designer of the project before commencement of works. Please note any proposed u-value or calculation contained in this specification and any associated quotation is subject to review until the principle designer confirms the actual required u-value.

Fastener withdrawal resistance tests (pull-out test) are recommended on certain refurbishment projects to determine the suitability of the roof deck for mechanical fixings. The withdrawal resistance test may be conducted by an independent laboratory or the fastener manufacturer or their designated representative. The results of the pull-out test must be marked on a roof plan to indicate the areas at which the tests were conducted and forwarded to BMI Group UK Ltd Technical Services Department for review prior to works commencing. On refurbishment projects, a core cutter should be used to remove existing roofing material to expose the deck prior to conducting the withdrawal resistance test.

6 - Materials

Unless otherwise agreed with BMI Group UK Ltd. Technical Services department in writing, all BMI Icopal specified products within the specification must be used.

All BMI Icopal materials to be used on site shall be new and inspected prior to roofing works commencing to ensure the quality of the materials is satisfactory. All BMI Icopal materials shall be handled, stored and fixed as required by the relevant BMI Icopal product data sheets and installation guidelines.

All BMI Icopal products should be stored in accordance with their relevant BMI technical data sheet and materials safety data sheet and follow the applicable codes of practice such as BS 8000 - Part 4 (2.1.2.2).

4. PRELIMINARIES - CONTINUED

6 - Materials	The roofing contractor shall coordinate all roofing works to ensure the integrity of all roofing system components is not compromised during installation. Storage of any material, temporary works such as scaffolding, items of plant and equipment, on top of any BMI Icopal product is only possible with appropriate protection in place, such as plywood boarding.
7 - Other	Do not apply the new BMI Icopal waterproofing system if the temperature or weather conditions are not as required by the specified products datasheet or installation guide. It is the roofing contractors responsibility to ensure that any adjoining areas to the specific project area that will have no roofing work requirements are protected against damage. It is the roofing contractors responsibility to also protect any vegetation, animals or ancillary items which might be affected by any roofing works or operations.
8 - Project Start Date	It is the roofing contractors responsibility to ensure that the start date of works on site is notified to BMI Group UK Ltd. Any changes to this date must be notified in due time as site inspections, which may be a condition of the guarantee offered, may be affected.

5.10142317.1.1 SPECIFICATION - 37 Cross Street Manchester Flat Roof

Enabling works

The following enabling or preparation works have been put together based on the survey that was carried out by the BMI Icopal representative. These enabling/preparation works must be carried out to allow the waterproofing system specification included in this document to qualify for its guarantee. Failure to follow these enabling/preparation works will result in the project not meeting the criteria for its guarantee. A sufficient cost should be allowed for as part of any roofing works to ensure the following enabling/roof preparation works can be carried out.

BMI Group UK Ltd. believe the deck and substrate to be as described in this document above. If the deck or substrate is in any way different please contact me or the BMI Group UK Ltd Technical Services Department immediately as the specification may need to be amended.

The existing structure and deck should be checked by a relevant qualified professional and their recommendations followed on any structural matters. As discussed with the client, confirmation of these works must be provided prior to works commencing on site.

It is the responsibility of the roofing contractor to ensure that they are satisfied as to the existing roof construction and substrate before tendering.

The roof areas indicated in this specification are approximate and should only be used as a guide. For accurate tendering purposes the client, main contractor or roofing contractor should confirm the exact areas and dimensions prior to the commencement of any roofing works.

It is the roofing contractors responsibility to ensure that there are sufficient falls in accordance with the current revisions of BS 6229 on the roof area and any internal gutters prior to the installation of the specified waterproofing system.

Temporarily remove or divert existing cables/services to allow the safe installation of the new waterproofing system. All work should be carried out by a suitably qualified operative and in conjunction with the building owner.

Any items outside the scope of the specification eg. roof fixtures, adornments, safety equipment, pipework etc., should be temporarily diverted or completely removed in order that the appropriate areas can be worked on. Roof fixtures or other items should not be removed without appropriate permission from the building owner or deference to safety. Prior to the replacement of any items ensure the new BMI Icopal system is complete and signed off.

On any rendered masonry upstands, remove any render to a height of 150mm above where the new waterproofing system including any surface finishes will be. Cut a new chase to a depth of 25mm and as wide as the upstand will be. If an existing damp proof course exists which is lower than this chase, consideration should be given to the insertion of a new damp proof course above it. Consideration should be made to the repair and reinstatement of the render and associated bell stop.

Remove the coping stones from the parapet walls and dispose.

Remove the existing waterproofing system down to the existing deck and all detailing membranes down to the substrate and dispose. Repair or replace any damaged areas of decking as appropriate to comply with all current guidance and regulations. A PC sum should be allowed for the replacement of defective areas of decking.

5.10142317.1.1 SPECIFICATION - CONTINUED - 37 Cross Street Manchester Flat Roof

Enabling works

Inspect and carry out any necessary repairs to existing upstands, abutment walls, kerbs and parapets, re-pointing or re-building any loose sections as necessary. The area to receive the new waterproofing system upstand should be wire brushed to remove all loose dust or surface contamination. The area must be left in a sound, clean and dry condition for the roofing works to commence.

Raise all upstand kerbs, cills and thresholds to provide the minimum 150mm upstand height from the finished roof level required by current guidance and standards. This may entail the removal and re-installation of items concerned such as doors, windows, rooflights etc. All items should be identified and confirmed with the building owner prior to roofing works commencing. Failure to attain the required upstand height may effect the guarantee BMI Group UK Ltd can offer.

Running parallel with the pitched roof abutment create a new internal gutter by installing preservative treated, structural softwood timber battens in accordance with the current version of BS EN-1995-1-1 to create gutter edges, where the insulation is susceptible to mechanical damage. Battens must be securely fixed to the roof deck with appropriate fixings. Thickness of the hard edge should be reduced sufficiently to avoid creating water checks and allow lapping of the waterproofing layers. The outer edge should be chamfered.

For areas where a pitched roof abuts a flat roof and there is less than a 150mm upstand to the underside of any roof tile/gutter, the new waterproofing system must be taken up under the tiles so that the waterproofing terminates 150mm above the height of the main waterproofing area, including any surface finishes.

Carefully remove and set aside courses of roof tiles, as appropriate, for the required roofing works to be undertaken. A new mechanically fixed ley board of 6mm WBP marine grade plywood must be installed to the existing roof rafters with appropriate mechanical fixings. The ley board should abut any rafters so that the specified waterproofing system can be terminated against the baton as a termination point.

The timber ley board should have all joints taped as required by the main detailing specification and primed if required with the specified primer. Any Vapour Control Layers, Insulation and waterproofing layers should be installed as per the main detailing specification.

Once the waterproofing system has been completed tile courses should be re-installed so that the termination point of the flat roof waterproofing system is covered by an eaves course of tiles. The pitched roof Underlay must be taken down so that it overlaps the termination point of the flat roof waterproofing by no less than 50mm.

Cut new 25mm deep chases in all masonry upstands and remove all superfluous dirt and debris. The height of the new chase should allow for a minimum 150mm upstand above the finished level of the new waterproofing surface including any surface finishes. If an existing damp proof course exists which is lower than this chase, consideration should be given to the insertion of a new damp proof course above it.

Ensure perimeter water checks maintain a minimum 50mm upstand from the finished roof level. This should be increased to 75mm in more exposed geographical locations.

Remove all superfluous materials, dust, debris and contaminates from the roof area and leave in a clean and dry condition.

5.10142317.1.1 SPECIFICATION - CONTINUED - 37 Cross Street Manchester Flat Roof

Preparation	Apply Icopal SA Primer to the prepared substrate which is to receive thermally activated membranes (Torchsafe T.A range). Apply at a minimum of 0.12-0.25litres m² coverage rate depending on ambient temperature and surface porosity by brush or roller to the whole surface thoroughly. The Torchsafe T.A membrane is to be installed whilst the primer is in a semi-cured state (tacky to touch). The primer must only be used between +4°C to +25°C, adhesion strength may vary if used outside of this.
Vapour Control Layer (VCL)	Install a layer of TorchSafe T.A. VCL - Sand to the prepared, primed (ensure that the Icopal SA primer is tacky to touch) substrate surface, following removal of the release sheet. Head laps should be a minimum of 100mm and side laps 75mm. Ensure the membrane is pressed firmly into the primed substrate using a water filled pressure roller or similar. All laps should be heat welded using a hot air gun and hand pressure roller. Enhanced adhesion if required can be achieved with the use of a hot air gun to the upper surface prior to the application of the insulation. At all upstands, details or vertical faces, the TorchSafe T.A. VCL - Sanded should be used. The TorchSafe T.A. VCL - Sanded must be bonded down onto the field area VCL membrane by a minimum of 150mm and should extend vertically in accordance with the main specification and all current codes of practice, guidance or client requirements.
Thermal Insulation	Install Thermazone Roofboard 130mm insulation board to the specified vapour control layer in accordance with current installation guidelines. All joints should be close butted and cross joints staggered to minimise cold bridging. Insulation boards should be covered immediately by the waterproofing system. Adhere the Insulation boards to the sanded VCL or packerboard if used using BMI Icopal Insulation Spray Adhesive in accordance with the current application guide. Apply minimum 30mm beads of adhesive at the required centres as required by the wind uplift calculation. Adhesive should always be applied across the width of the Insulation board. Lay the Insulation board immediately into the adhesive. Do not allow the adhesive to skin over as this will affect the bond strength. Initial bond will be achieved after 15 minutes after which time the boards are safe to walk on. Full bond strength will occur within 24 hours once the adhesive has cured. Insulation boards must be supplied by BMI Group UK Ltd. as this is a condition of the specification guarantee. Insulation boards are supplied in shrink wrapped polythene which will only provide limited protection during unloading and handling. Boards should be stored inside a building where possible. If outside storage cannot be avoided, boards should be stored flat, raised off the ground and tarpaulins or heavy gauge waterproof sheets should be used to cover the boards at all times. The delivery packaging alone cannot under any circumstances be relied upon to provide the required protection from moisture and inclement weather. Insulation boards that have been allowed to get wet must not be used under any circumstance.

5.10142317.1.1 SPECIFICATION - CONTINUED - 37 Cross Street Manchester Flat Roof

Thermal Insulation	Please note that the specification of flat board insulation will not improve the existing falls within the roof area. Temporary ponding of water on BMI Icopal waterproofing membranes will have no detrimental effect on the integrity of the waterproofing system, provided it has been installed in accordance with the specification. BMI Icopal waterproofing membranes have the capacity to accommodate the additional stresses imposed on the membranes by temporary ponding, however, we recommend that all guidance in accordance with the current revisions of BS 6229, BS 8217, SPRA, the LRWA, NFRC, LABC, and NHBC is followed to avoid ponding wherever possible. In the event of ponded areas, additional roof maintenance in addition to the normal requirements of the BMI Icopal care and maintenance manual will be required to regularly clear leaves, silt or other debris from these roof areas. Ponding water may have the following negative effects on the finished flat roof. ● Potential increased water loading on the structure should be taken into account. ● The aesthetics may be affected with the increased risk of membrane staining, algae, moss and insect infestations. ● There are potential health and safety concerns that may also arise such as odour/hygiene and a slip risk especially in freezing conditions. ● If the waterproofing membrane is penetrated in an area where ponding water forms there is a high risk of a leak. Temporary ponding water will not affect the BMI Group UK Limited guarantee for the project. BMI Group UK Ltd. consider temporary to be a period within 48 hours after rainfall. The named insulation at the above thickness will achieve a u-value of 0.18 W/m²K.
Underlay	Install Icopal S.A. Primer to the substrate or insulation at the required rates before installing the TorchSafe T.A. Detailing Underlay following removal of the release sheet. Head laps to be a minimum of 100mm and side laps 75mm minimum. All laps should be heat welded using a hot air gun. A consistent extrusion of bitumen should be visible at all laps. Ensure the membrane is firmly pressed into the substrate using a water filled pressure roller or similar. Full enhanced adhesion is achieved by heating from above as the capsheet is torch-applied, or by the use of a hot air gun as the underlay membrane is laid down if a flame free waterproofing system is being used onto it.
Capsheet	Capsheet to the field area to be a layer of Torchsafe T.A Detailing Firesmart Mineral capsheet. The membrane must be installed to the detailing underlay, fully bonded, by careful use of a flame free hot air gun. All side laps to be 75mm minimum and all overlaps onto the field area to be a minimum 150mm. The capsheet must be installed in accordance with the main specification and the products data sheet and installation guide. Ensure a continuous visible extrusion of bitumen is present at all laps. Cap sheet and Underlay should be staggered to prevent a build up of bitumen at the side laps.

Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
Project Ref: 10142317



5.10142317.1.1 SPECIFICATION - CONTINUED - 37 Cross Street Manchester Flat Roof

Capsheet

Please ensure that the BMI Icopal system is laid with the use of a rigid core and roll bar for all membranes to ensure evenly distributed pressure during application.

All reinforced bitumen membranes must be stored on end, on a clean, dry, flat, level surface, undercover and away from direct sources of heat. Protect the rolls against continuous exposure to moisture.

Colour of mineral capsheet to be CHARCOAL. It is the responsibility of the Roofing Contractor to ensure that the membranes purchased for use in detailing are colour matched to the membranes used on the main roof areas.

It is the responsibility of the Roofing Contractor to ensure that the membranes purchased are the required colour for the project.

5.10142317.1.1 DETAILING - 37 Cross Street Manchester Flat Roof

Detail Waterproofing

Ensure all detailing substrate surfaces are free from cracks, debris, projections rough areas and cavities. The substrate must be clean and dry.

Apply BMI Icopal S.A Primer to the prepared detailing substrate which is to receive thermally activated membranes (Torchsafe T.A range). Apply at a minimum of 0.12-0.25litres m2 coverage rate depending on ambient temperature and surface porosity by brush or roller to the whole surface thoroughly. The Torchsafe T.A membrane is to be installed whilst the primer is in a semi-cured state (tacky to touch). The primer must only be used between +4 degrees C to +25 degrees C, adhesion strength may vary if used outside of this.

The BMI Icopal installation guide should be followed along with the product datasheets and if further information is required please contact BMI Group UK Ltd Technical Services Department.

Install a layer of BMI Icopal TorchSafe T.A. VCL - Sand to the prepared, primed (ensure that the BMI Icopal SA primer is tacky to touch) substrate surface, following removal of the release sheet. Head laps should be a minimum of 100mm and side laps 75mm. Ensure the membrane is pressed firmly into the primed substrate using a water filled pressure roller or similar. All laps should be heat welded using a hot air gun and hand pressure roller. Enhanced adhesion if required can be achieved with the use of a hot air gun to the upper surface prior to the application of the insulation. The BMI Icopal TorchSafe T.A. VCL - Sanded must be bonded down onto the field area VCL membrane by a minimum of 150mm.

At all upstand and around details, the vapour control layer membrane must extend vertically in accordance with the main BMI Icopal specification and installation guidelines.

Install Thermazone insulation board to the specified detailing vapour control layer in accordance with current installation guidelines. Thickness to be the same as the main field area specification. All joints should be close butted and cross joints staggered to minimise cold bridging. Insulation boards should be covered immediately by the specified waterproofing system.

Install the appropriate Angle Fillet at the junction of the horizontal and vertical surfaces. The angle fillet should be the same insulation type as the main specification and supplied by BMI Group UK Ltd. Ensure angle fillets are securely fixed using appropriate fixings or insulation adhesive as per the installation instructions and products being used.

Apply Icopal S.A. Primer to the insulation boards prior to installing a layer of TorchSafe T.A. Detailing Underlay to the detail substrate following removal of the release sheet. Head laps to be a minimum of 100mm and side laps 75mm minimum. All laps should be heat welded using a hot air gun. A consistent extrusion of bitumen should be visible at all laps. Ensure the membrane is firmly pressed into the substrate using a water filled pressure roller or similar. Full enhanced adhesion is achieved by heating from above as the capsheet is torch-applied, or by the use of a hot air gun as the underlay membrane is laid down if a flame free waterproofing system is being used onto it.

For all non-flammable substrates the capsheet to the details must be a layer of Thermaweld Firesmart Mineral, fully bonded by careful torching ensuring the thermofusible film is completely removed from the underside as work proceeds. Head laps to be 150mm and side laps to follow the mineral-free selvedge and be minimum 75mm. The cap sheet must be offset horizontally by around 300mm from the underlay to avoid excessive membrane build up at side laps. Ensure there is a continuous extrusion of bitumen visible at all laps.

5.10142317.1.1 DETAILING - CONTINUED - 37 Cross Street Manchester Flat Roof

Detail Waterproofing

Secure the specified roofing waterproofing membrane to the detail using a roofers gas torch and careful torching.

The specified BMI Icopal bituminous membrane requires torching on. All current relevant guidance should be followed for torching on bituminous membranes such as the current versions of BS8217, BS6229, HSE documentation, NFRC guidance documents and BMI Icopal Installation guides.

Important note; Thermaweld Firesmart Mineral capsheet is not suitable for direct application by torching to combustible substrates, or against details where there is a risk of fire due debris or other flammable hazards. Ensure those substrates are protected or use alternative detailing products.

To all flammable substrates the capsheet to the details to be a layer of Torchsafe T.A Detailing Firesmart Mineral capsheet. The detailing membrane must be installed to the detailing underlay, fully bonded, by careful use of a flame free hot air gun. All side laps to be 75mm minimum and all overlaps onto the field area to be a minimum 150mm. The capsheet must be installed in accordance with the main specification and the products data sheet and installation guide. Ensure a continuous visible extrusion of bitumen is present at all laps. Cap sheet and Underlay should be staggered to prevent a build up of bitumen at the side laps.

Secure the specified roofing waterproofing membrane to the detail using a hot air gun.

Use a specialised hot air gun with the specified membranes. The membrane must be heated to reach its plasticized state. The membranes to be welded must then be pressed together with a pressure roller once sufficiently heated. This will cause the surface molecules of the welded parts to interlock resulting in the 2 membranes bonding together. Test bonds should be conducted to ascertain the correct welding temperature on the heat gun. A tack weld is recommended to prevent the membranes slipping prior to welding of the edge of the membrane to form a bead. All laps must have a continuous visible extrusion of bitumen.

The cap sheet should be installed so that it extends out onto the field area by a minimum of 300mm. At the top edge of the bitumen membrane it should be secured as specified to ensure a watertight termination. Colour to match the main field area membrane.

Drips and Trims

For the watercheck/parapet detail; mechanically fix with appropriate fixings a treated timber hard edge at the roof perimeters. The hard edge should be 75mm more than the thickness of the insulation and a minimum of 200mm wide to form a water check that prevents water running over the perimeter. A timber or insulation angle fillet should be used to smooth the transition from the top of the water check to the field area. Exposed building locations will require the full recommended height of 75mm for the water check.

Apply a layer of the specified detailing underlay fully bonded to the prepared primed detail following removal of the release sheet using flame-free hot-air equipment, or by careful torching if a torchon membrane is being used, ensuring the thermofusible film is removed as works proceed.

5.10142317.1.1 DETAILING - CONTINUED - 37 Cross Street Manchester Flat Roof

Drips and Trims

The underlay must be bonded to the field area by a minimum 100mm and extend up onto the outside edge of the watercheck hard edge, in accordance with BMI Icopal standard details. Ensure the underlay extends 25mm beyond the roof edge. Ensure the membrane is sufficiently adhered to the substrate. All laps should have a consistent visible extrusion of bitumen. Install any specified metal or GRP edge trims prior to installing any Cap Sheet membranes.

Install appropriate sized Roofgard GRP Edge Trim to the external edge of the water check hard edge. The trim should be screw fixed at 300mm centres using minimum 20mm x 3.0mm stainless steel wood screws, including any pre-formed internal and external corners used. GRP jointing spigots should be installed at all joints between adjoining trim lengths. The specified waterproofing membrane must be dressed tightly into the trim edge and dressed back fully over the water check kerb and down onto the main roof field membrane a minimum 300mm.

Install the specified detailing cap sheet to the installed trim in line with the main detailing specification. The cap sheet must lap down onto the field area membrane fully by a minimum of 300mm and covering the top of the watercheck completely. All laps must be a minimum of 100mm. There must be a continuous visible extrusion at all laps. Please refer to the products datasheet, BMI Group UK Ltd. drawing details and installation guides for further information.

Upstands

Ensure the upstand surfaces, are clean, dry and prepared as appropriate and as per the main specification requirements. Prime the substrate surfaces with the specified detailing primer at the specified coverage rates.

Apply the specified detailing Vapour Control Layer VCL to the prepared primed surface of the upstand, installing in accordance with current product instructions and specification. Head laps should be a minimum of 150mm and side laps should follow the manufactured selvage and be minimum 75mm. The VCL must be bonded to the field area VCL by a minimum 150mm and extend vertically to the required upstand detail height. Ensure the membrane is sufficiently adhered to the substrate. Ensure all laps have a consistent visible extrusion of bitumen.

Install the Thermazone Insulation, mechanically fixed or adhered as appropriate to the vertical surface of the upstand. The insulation board should be a minimum height of 300mm from the deck top of the structural deck level to limit possible cold bridging in accordance with Approved Documents Part L or local building regulations. The thickness of the insulation boards should match the thermal performance of the main roof area or to satisfy client instructions. All joints should be close butted and cross joints staggered to minimise cold bridging. Insulation boards should be covered immediately by the waterproofing system.

Install the specified Angle Fillets at the junction of the horizontal and vertical surfaces. Ensure they are securely fixed using appropriate fixings or insulation adhesive as per the installation instructions.

Apply Icopal S.A. Primer to the insulation boards prior to installing a layer of Torchsafe T.A. Detailing Underlay to the prepared surface of the upstand detail. An angle fillet should be used at the junction of the horizontal and vertical surfaces. Fully bond the membrane using flame-free hot-air equipment to the underside of the membrane following removal of the release sheet. The membrane should be applied whilst the primer is in a semi-cured state. Head laps to be 100mm and side laps 75mm minimum. Ensure there is a continuous visible extrusion of bitumen from all laps. The underlay should overlap onto the field area by a minimum of 150mm. Ensure the membrane is sufficiently adhered to the substrate.

5.10142317.1.1 DETAILING - CONTINUED - 37 Cross Street Manchester Flat Roof

Upstands

To any flammable substrates, or if flammable materials are in close proximity, apply a layer of the specified Torchsafe T.A Detailing Firesmart Mineral capsheet to the upstand detail, fully bonded to the underlay by careful use of a flame free hot air gun. All side laps to be 75mm minimum and all overlaps onto the field area to be a minimum 150mm. The capsheet must be installed in accordance with the main specification and the products data sheet and installation guide. Ensure a continuous visible extrusion of bitumen is present at all laps. Cap sheet and Underlay should be staggered to prevent a build up of bitumen at the side laps.

The cap sheet should be installed so that it extends out onto the field area by a minimum of 300mm. At the top edge of the bitumen membrane it should be secured as specified to ensure a watertight termination. Colour to match the main field area membrane.

Install FormFlash cover flashing dressed into the chases provided and secure using FormFlash Fixing Clips at 400mm centres and every change of direction. Cut, joint and dress the new flashing neatly to provide a minimum 75mm cover to the upstand waterproofing. Complete by pointing with a suitable bitumen-compatible sealant. If in doubt, consult sealant manufacturer for guidance. The pointing must be regularly checked and maintained to ensure compliance with guarantee terms and conditions.

If required, install new/reinstate render system, as specified by the building owner/others, above the completed waterproofing system upstand. Ensure the flashing or render bead stop drip, as appropriate, overhangs the waterproofing system to shed any vertical surface water onto the roof field area.

Gutters

Install the specified primer and VCL across the whole roof area prior to installing any gutter hard edges.

At gutter edges, prime timber hard edges with Icopal S.A. Bitumen Primer and install TorchSafe T.A. VCL - Sanded. Use of the membrane will also help ensure vulnerable substrates are protected against risk of fire when using torch-applied membranes. The VCL should be bonded to the field area VCL by a minimum 150mm and extend onto the hard edge. Ensure the membrane is sufficiently adhered.

Important note; If using torch-applied membranes, ensure any vulnerable substrates or other flammable hazards are protected against risk of fire.

To the gutter, install 60mm Thermazone insulation boards in the same method as the main detailing specification. All joints should be close butted and cross joints staggered to minimise cold bridging. Insulation boards should be covered immediately by the specified waterproofing system. Where required, an additional packer board of Thermazone Roofboard may be installed first to achieve the required gutter board thickness.

Apply Icopal S.A. Primer to the insulation boards prior to installing a layer of the specified fully bonded detailing underlay as per the detailing specification. All details must be formed in accordance with current relevant codes of practice, BMI Icopal installation instructions and BMI Group Drawing Details. All laps should be checked for security as work proceeds. All bitumen membrane laps should be increased to 150mm in the gutter to provide additional security to this area. For any bitumen based membrane there must be a consistent extrusion of bitumen visible at every lap.

5.10142317.1.1 DETAILING - CONTINUED - 37 Cross Street Manchester Flat Roof

Gutters	Complete the gutter detail by applying a layer of detailing cap sheet to the underlay on the sole of the gutter first, as per the main detailing specification section. The detailing cap sheet must then be dressed from the main field area underlay membrane down onto the sole of the gutter as separate pieces on each side. Detailing must be completed prior to the main field area cap sheet installation being started. All laps should be checked for security as work proceeds. The membrane laps should be increased to 150mm in the gutter to provide additional security to this area. Ensure there is a continuous extrusion of bitumen visible at all laps. Please refer to BMI Icopal installation guides, product data sheets and BMI Group UK Ltd. drawing details for further information.
Outlets	If required a sump should be formed for the outlet in the insulation using a suitably sized thickness of insulation. The sump should be detailed carefully using the same products as specified in the detailing overview section of the specification. Form the chute detail, sized to suit watercheck/parapet width and of sufficient overhang to discharge water into the hopper head. Supply new Code 4 lead chute liners to all drainage chutes. All chute liners are to be site fabricated to suit the individual details with all joints being lead burned. The chute liner should be primed and fabricated to provide a minimum of 100 mm bonding area for the specified bitumen cap sheet waterproofing to lap onto the lead. The flange of the lead sleeve must be positioned between the specified underlayer and cap sheet to ensure best water tightness and security. On completion, the lead liner must be turned down and dressed into the hopper head and the ears returned back and chased into the outer wall.
Pitched	Where the waterproofing system needs to be dressed beneath the pitched roof area to achieve the minimum upstand height apply Icopal S.A. Primer, by brush or roller or using spray application in accordance with current instructions, to prepare the areas of substrate that are to receive the bituminous thermally activated vapour control layer. To the pitched roof abutment; apply TorchSafe T.A. VCL - Sanded to the prepared surface of the substrate, and install in accordance with current instructions. Head laps to be 100mm and side laps should follow the manufactured selvedge and be minimum 75mm and be hot-air welded. The VCL must be bonded to the field area VCL by a minimum 150mm and extend vertically onto the layboard at the pitched roof detail. Ensure the membrane is sufficiently adhered to the substrate. Apply a layer of Anderson T.A Detailing Underlay to the surface of the pitched roof abutment detail, using flame-free hot-air equipment to the underside following removal of the release sheet. The membrane should be applied whilst the primer is in a semi-cured state. Head laps to be 100mm and side laps 75mm minimum. Ensure the membrane is sufficiently adhered to the substrate. Apply a layer of Torchsafe T.A Detailing Firesmart Mineral capsheet to the detail, fully bonded to the underlay following removal of the release sheet. Capsheet to be installed as separate items with head laps of 150mm and side laps should follow the manufactured selvedge, and be a minimum 75mm. All details to be formed in accordance with current codes of practice. Where ever possible, overlaps should be hot-air welded, ensuring a continuous 5mm bead of bitumen extrudes at all laps to affect a seal. The waterproofing system should extend beneath the roof tiles/cladding to maintain continuity of the waterproofing for a minimum vertical height of 150mm above finished roof level. Where the pitched roof drains directly onto the field area membranes a sacrificial layer of the specified capsheet should be installed beneath to prevent erosion of the waterproofing system.

5.10142317.1.1 GUARANTEE - 37 Cross Street Manchester Flat Roof

Guarantee

BMI Group UK Limited hereby offer a 20 Year Insured System Plus Guarantee on the above project, subject to satisfactory inspected installation in accordance with this BMI Icopal specification. All works completed should be carried out by an BMI Group UK Ltd. approved installer, and be in accordance with relevant current codes of practice and BMI Group UK Ltd. instructions.

BMI Group UK Ltd. should be notified at least 7 working days prior to commencement of works to schedule the required inspections throughout the installation of the project. A BMI Group UK Ltd. representative must attend site in conjunction with the approved contractor to carry out a final inspection. All other works by third party contractors necessary to provide a weathertight finish should be satisfactorily completed prior to the final inspection.

Following the satisfactory completion of the project, the roofing contractor should complete and submit a guarantee application form to BMI Technical Guarantee Administration Department within six months of the waterproofing final inspection date. All supporting test certificates should accompany the guarantee application. Upon receipt and verification of all documentation, the BMI Group UK Ltd. Guarantee will be issued to the approved contractor.

It is a condition of the BMI Group UK Ltd. Guarantee that in addition to the inspections carried out each year by the client, that the client is responsible for arranging an inspection of the roof in each fifth year after issue of the guarantee by the BMI approved roofing contractor. A detailed inspection report should be returned to the BMI Technical Guarantee Administration Department confirming that the waterproofing integrity of the waterproofing membrane is still intact. Any maintenance to the roof should be carried out in accordance with the BMI Group UK Ltd. Flat roofing, care, Inspection and maintenance guide.

Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
Project Ref: 10142317



6. MATERIAL SCHEDULE

PRIMER

BMI Icopal S.A. Primer (Pour)

A high performance polymeric quick drying solution for the preparation of a variety of surfaces prior to the application of thermally activated bitumen waterproofing membranes. It has been formulated to have high tack properties and the instant grab of the primer secures the membrane for a watertight seal once cured.

Size: 5 Litre. Product Code: 20000724

Size: 25 Litre. Product Code: 20000725

Application Rate: 0.1-0.3 L/m².

VAPOUR CONTROL LAYER

TorchSafe T.A. VCL - Sanded

A SBS-modified bituminous membrane reinforced with an extra strong glass fibre fleece with a PET film.

Topside: Sand.

Underside: Heat-activated self-adhesive bitumen with pull-off release sheet.

Roll Size: 15m x 1m.

Roll Weight: 31kg.

Rolls Per Pallet: 30.

Product Code: 10001443.

ADHESIVE

BMI Icopal Insulation Spray Adhesive

BMI Icopal Insulation Spray Adhesive is a single component polyurethane foam adhesive for bonding of thermal insulation boards to a range of substrates on flat roofs.

Insulation Adhesive Canister:

Size: 22L

Product Code: 20000717.

Insulation Spray Adhesive Gun:

Nozzle length: 470mm

Product Code: 20000718.

Braided Hose:

Hose Length: 3.6m

Product Code: 20000719.

Hose & Gun Cleaning Adapter

Product Code: 20000720.

Hose & Gun Cleaner

Size: 500ml

Product Code: 20000721

INSULATION

Thermazone Roofboard 130mm

High performance rigid urethane CFC/HCFC free insulation board used in flame-free waterproofing system applications.

Thermal conductivity: Core: 0.024-0.026 W/m²K

Upper Face: Mineralised glass tissue.

Lower Face: Mineralised glass tissue.

Board Size: 1200mm x 600mm.

20000334 Thermazone Roofboard – 130mm

Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
Project Ref: 10142317



6. MATERIAL SCHEDULE

UNDERLAY PRIMER

BMI Icopal S.A. Primer (Pour)

A high performance polymeric quick drying solution for the preparation of a variety of surfaces prior to the application of thermally activated bitumen waterproofing membranes. It has been formulated to have high tack properties and the instant grab of the primer secures the membrane for a watertight seal once cured.

Size: 5 Litre. Product Code: 20000724

Size: 25 Litre. Product Code: 20000725

Application Rate: 0.1-0.3 L/m².

UNDERLAY

TorchSafe T.A. Detailing Underlay

CAPSHEET

FireSmart T.A. Detailing Mineral Capsheet

A high performance thermally activated SBS modified bitumen membrane intended for use as a top sheet at details in a built up roof system.

Topside: Mineral Granules.

Underside: Pull-off release sheet.

Roll Size: 7m x 1m.

Roll Weight: 38kg.

Rolls Per Pallet: 30.

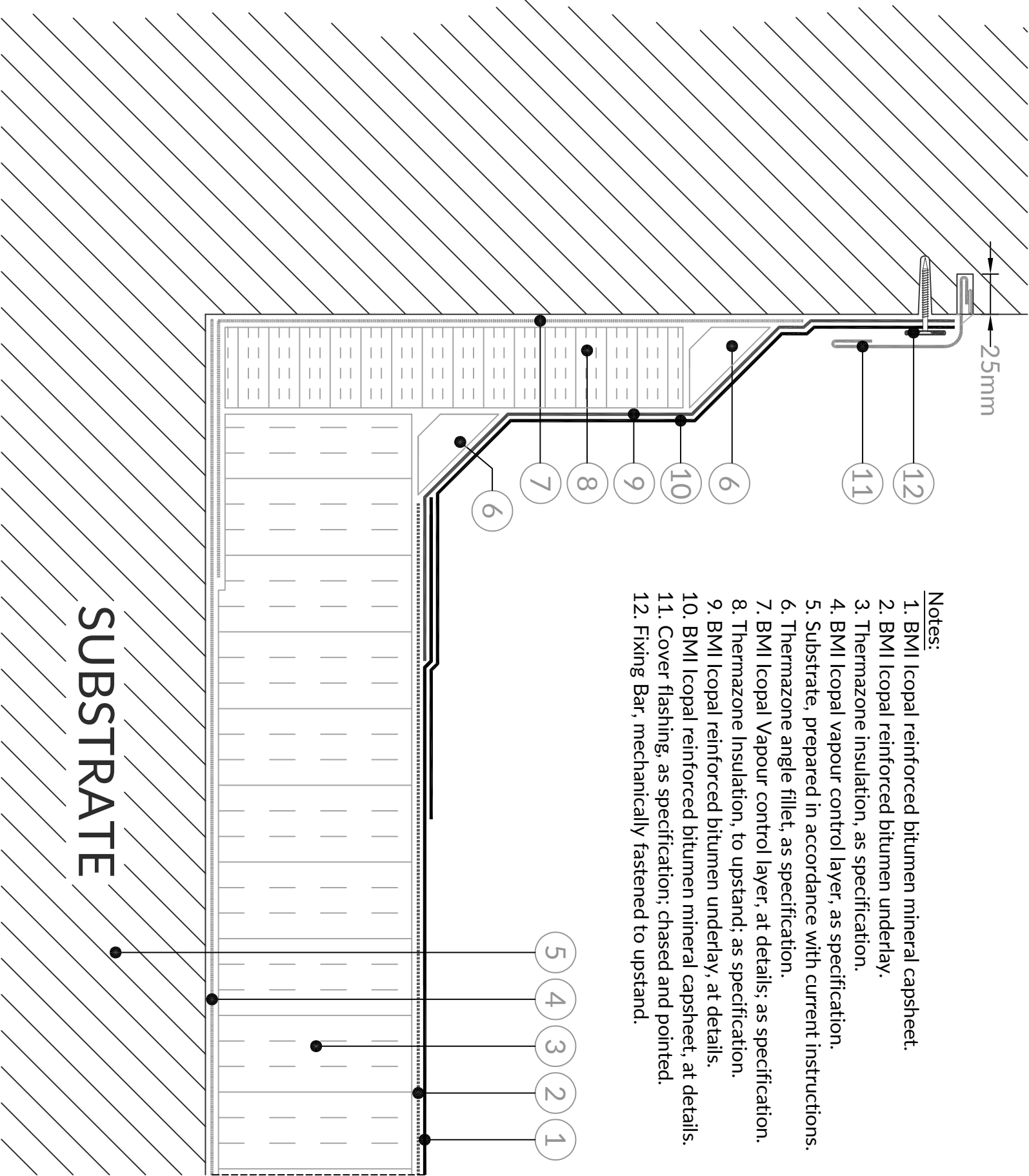
Product Code: 10001223 FireSmart T.A. Detailing Mineral Charcoal.

Other colours available on request. (Minimum Order Quantity)

7. DRAWINGS -

Drawing Reference Number**	Description of Drawing
37 Cross Street Manchester Flat Roof	
T-W-01-101 - Warm Roof Upstand To Abutment with Flashing	T-W-01-101 - Warm Roof Upstand To Abutment with Flashing
T-W-01-107 - Upstand with Cover Flashing Termination to Render	T-W-01-107 - Upstand with Cover Flashing Termination to Render
T-W-03-101 - Watercheck with GRP Edge Trim	T-W-03-101 - Watercheck with GRP Edge Trim
T-W-03-103 - Watercheck With GRP Trim And Internal Edge Gutter	T-W-03-103 - Watercheck With GRP Trim And Internal Edge Gutter
T-W-05-104 - Warm Roof to Parapet Lead Chute	T-W-05-104 - Warm Roof to Parapet Lead Chute
T-W-10-104 - Pitched Roof Abutment	T-W-10-104 - Pitched Roof Abutment

**Please refer to the Drawings at the end of this Specification using the Reference number(s) quoted above



- Notes:**
1. BMI Icopal reinforced bitumen mineral capsheet.
 2. BMI Icopal reinforced bitumen underlay.
 3. Thermazone insulation, as specification.
 4. BMI Icopal vapour control layer, as specification.
 5. Substrate, prepared in accordance with current instructions.
 6. Thermazone angle fillet, as specification.
 7. BMI Icopal Vapour control layer, at details; as specification.
 8. Thermazone Insulation, to upstand; as specification.
 9. BMI Icopal reinforced bitumen underlay, at details.
 10. BMI Icopal reinforced bitumen mineral capsheet, at details.
 11. Cover flashing, as specification; chased and pointed.
 12. Fixing Bar, mechanically fastened to upstand.

Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI Icopal project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

i. This drawing is intended to demonstrate the recommended detailing of BMI Icopal waterproofing membranes and systems.

ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

Additional Notes

i. For roofing product references please see BMI Icopal specification where applicable.

ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.

iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI Icopal instructions.

iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.

SUBSTRATE

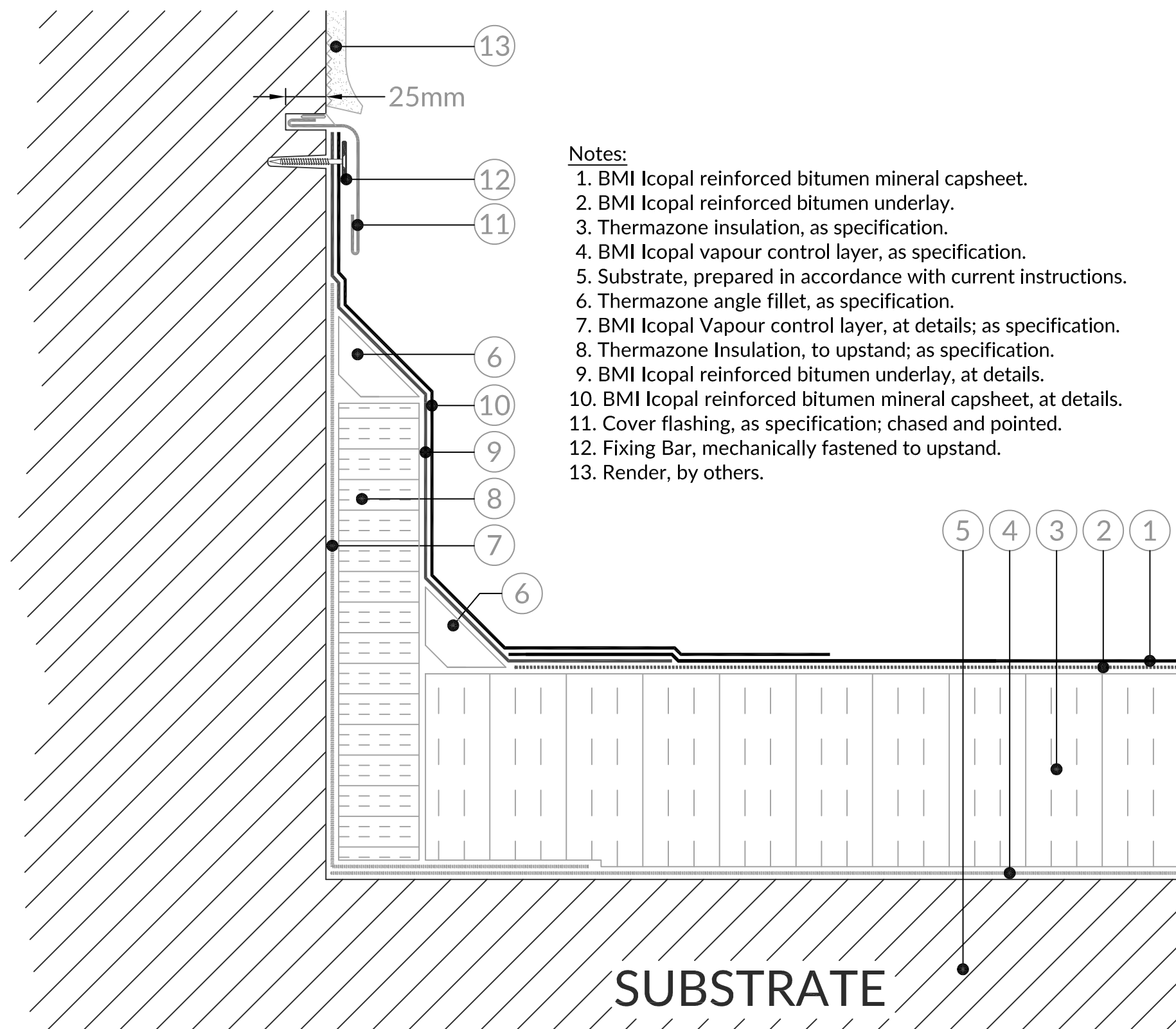


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Drawing Title:	Warm Roof Upstand To Abutment Wall with Cover Flashing			
System:	Reinforced Bitumen Membranes - Two Layer System			
Dwg. No:	T-W-01-101	Date:	15/06/2022	Scale
				NTS

This drawing has been prepared for general information purposes only. This details drawing is to recommend the correct procedure for installing BMI products. All other building details are indicative and are not to be used for building construction. (Do not scale- use figured dimensions only)

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Notes:

1. BMI Icopal reinforced bitumen mineral capsheet.
2. BMI Icopal reinforced bitumen underlay.
3. Thermazone insulation, as specification.
4. BMI Icopal vapour control layer, as specification.
5. Substrate, prepared in accordance with current instructions.
6. Thermazone angle fillet, as specification.
7. BMI Icopal Vapour control layer, at details; as specification.
8. Thermazone Insulation, to upstand; as specification.
9. BMI Icopal reinforced bitumen underlay, at details.
10. BMI Icopal reinforced bitumen mineral capsheet, at details.
11. Cover flashing, as specification; chased and pointed.
12. Fixing Bar, mechanically fastened to upstand.
13. Render, by others.

Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI Icopal project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

i. This drawing is intended to demonstrate the recommended detailing of BMI Icopal waterproofing membranes and systems.

ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

Additional Notes

i. For roofing product references please see BMI Icopal specification where applicable.

ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.

iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI Icopal instructions.

iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.



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Drawing Title: Warm Roof Upstand with Cover Flashing Termination to Render

System: Reinforced Bitumen Membranes - Two Layer System

Dwg. No: T-W-01-107

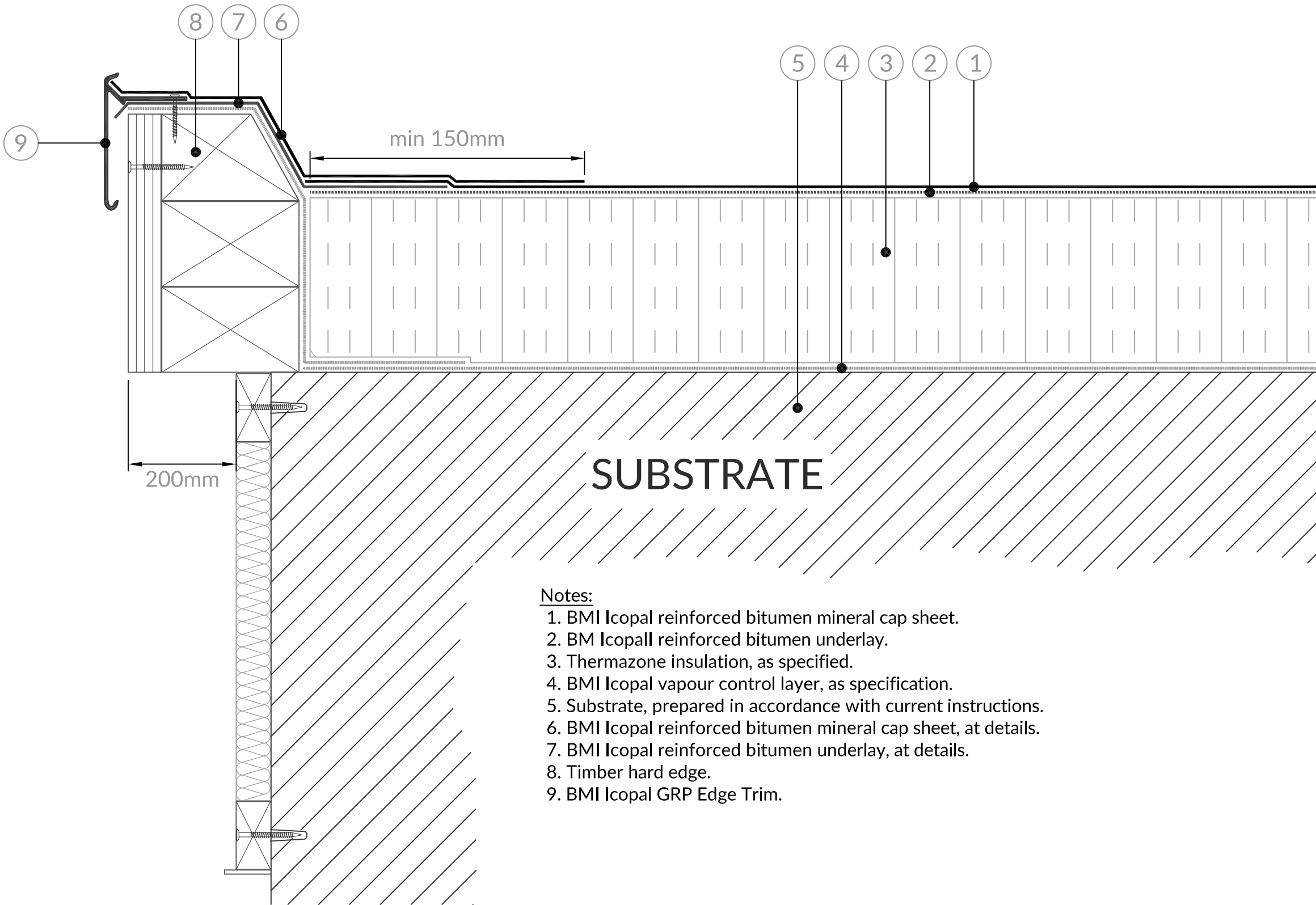
Date: 15/06/2022

Scale

NTS

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Notes:

1. BMI Icopal reinforced bitumen mineral cap sheet.
2. BM Icopall reinforced bitumen underlay.
3. Thermazone insulation, as specified.
4. BMI Icopal vapour control layer, as specification.
5. Substrate, prepared in accordance with current instructions.
6. BMI Icopal reinforced bitumen mineral cap sheet, at details.
7. BMI Icopal reinforced bitumen underlay, at details.
8. Timber hard edge.
9. BMI Icopal GRP Edge Trim.

Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI Icopal project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

- i. This drawing is intended to demonstrate the recommended detailing of BMI Icopal waterproofing membranes and systems.
- ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

Additional Notes

- i. For roofing product references please see BMI Icopal specification where applicable.
- ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.
- iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI Icopal instructions.
- iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.

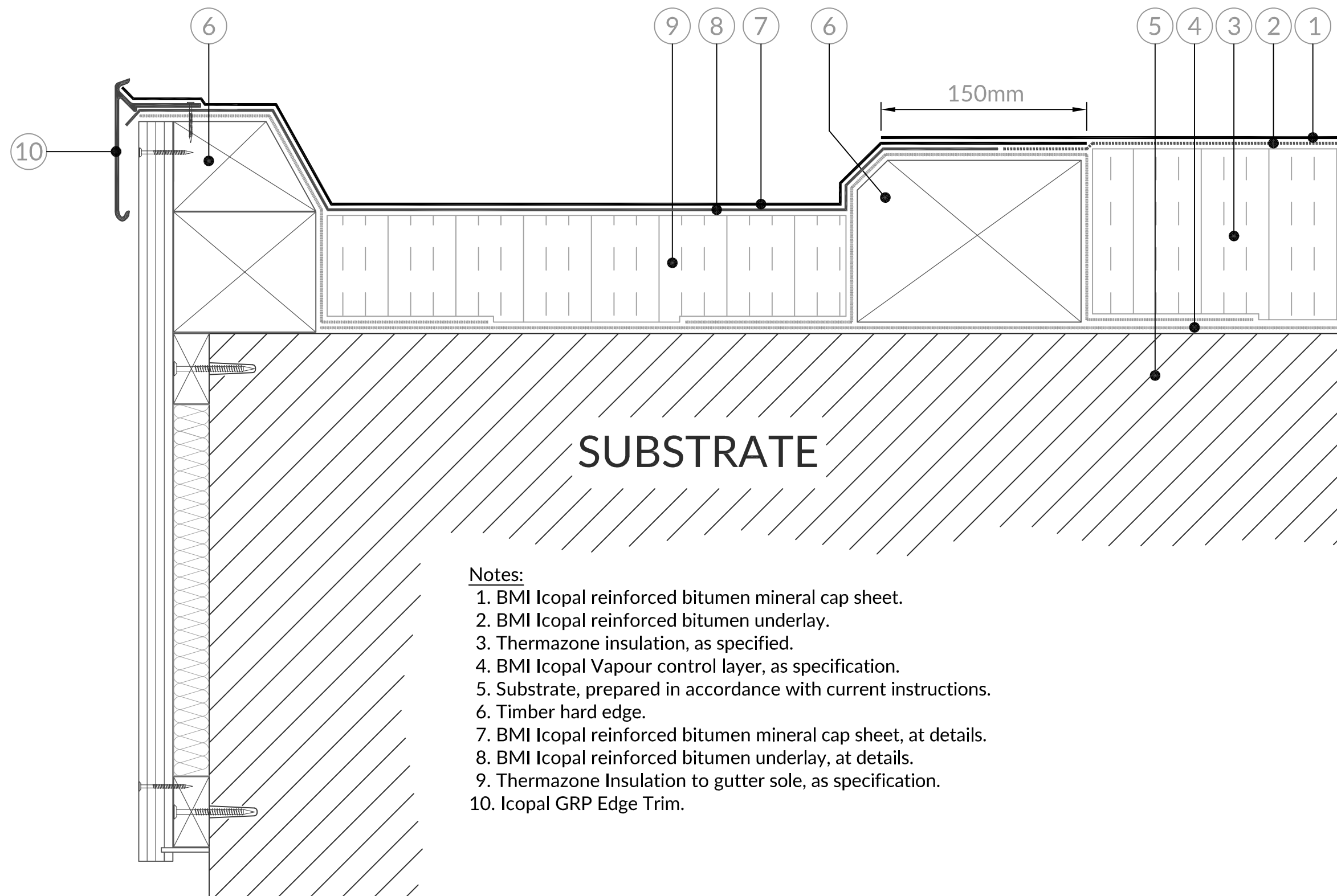


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Drawing Title:	Warm Roof To Watercheck with GRP Edge Trim				
System:	Reinforced Bitumen Membranes - Two Layer System				
Dwg. No:	T-W-03-101	Date:	16/06/2022	Scale	NTS

This drawing has been prepared for general information purposes only. This details drawing is to recommend the correct procedure for installing BMI products. All other building details are indicative and are not to be used for building construction. (Do not scale- use figured dimensions only)

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Notes:

- 1. BMI Icopal reinforced bitumen mineral cap sheet.
- 2. BMI Icopal reinforced bitumen underlay.
- 3. Thermazone insulation, as specified.
- 4. BMI Icopal Vapour control layer, as specification.
- 5. Substrate, prepared in accordance with current instructions.
- 6. Timber hard edge.
- 7. BMI Icopal reinforced bitumen mineral cap sheet, at details.
- 8. BMI Icopal reinforced bitumen underlay, at details.
- 9. Thermazone Insulation to gutter sole, as specification.
- 10. Icopal GRP Edge Trim.

Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI Icopal project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

- i. This drawing is intended to demonstrate the recommended detailing of BMI Icopal waterproofing membranes and systems.
- ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

Additional Notes

- i. For roofing product references please see BMI Icopal specification where applicable.
- ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.
- iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI Icopal instructions.
- iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.



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Drawing Title:	Warm Roof To Watercheck With GRP Trim And Internal Edge Gutter				
System:	Reinforced Bitumen Membranes - Two Layer System				
Dwg. No:	T-W-03-103	Date:	16/06/2022	Scale	NTS

This drawing has been prepared for general information purposes only. This details drawing is to recommend the correct procedure for installing BMI products. All other building details are indicative and are not to be used for building construction. (Do not scale- use figured dimensions only)

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Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI topical project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

i. This drawing is intended to demonstrate the recommended detailing of BM1 Icopol waterproofing membranes and systems.

ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

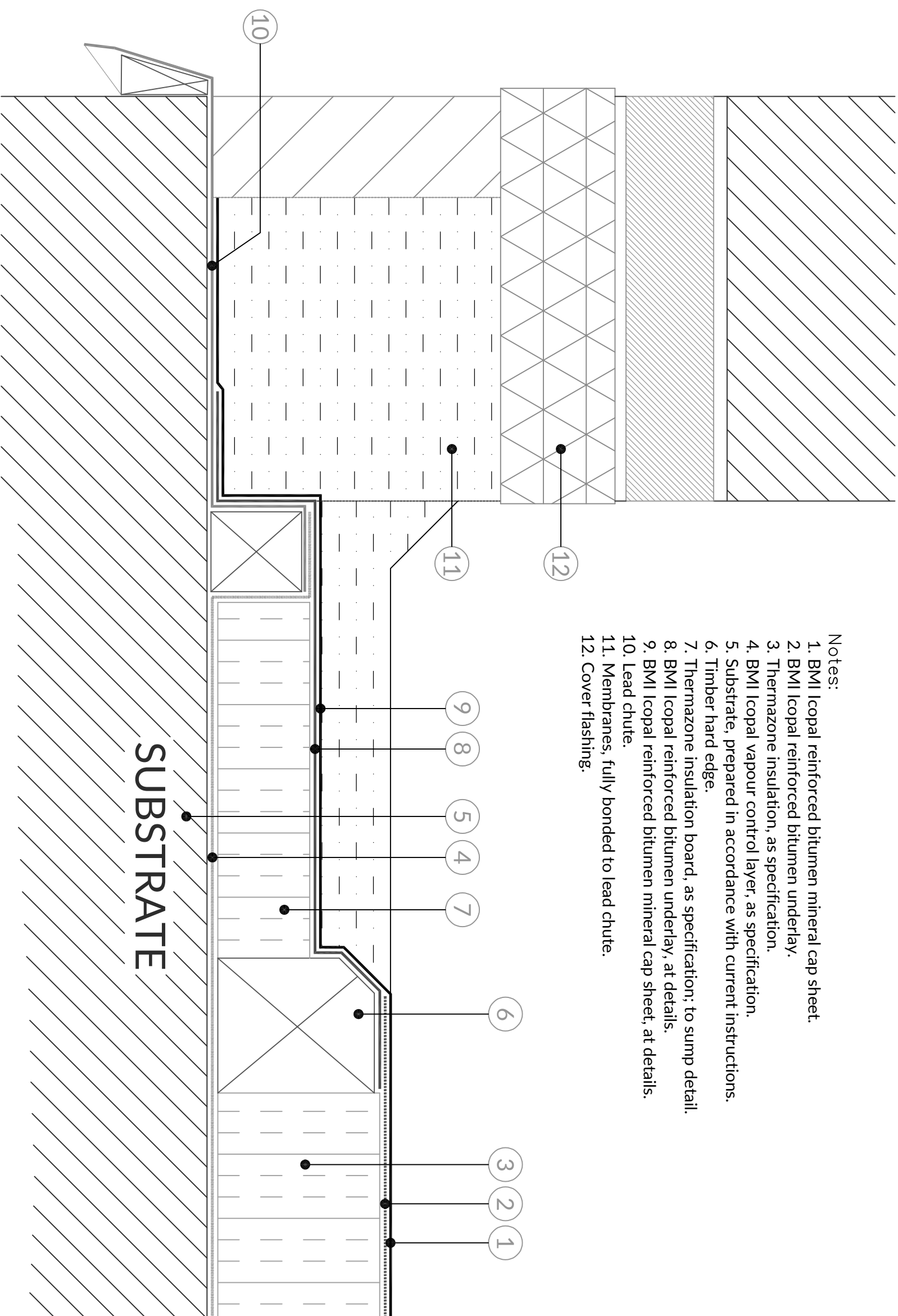
Additional Notes

i. For roofing product references please see BML Copal specification where applicable.

ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.

iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI local instructions.

iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.

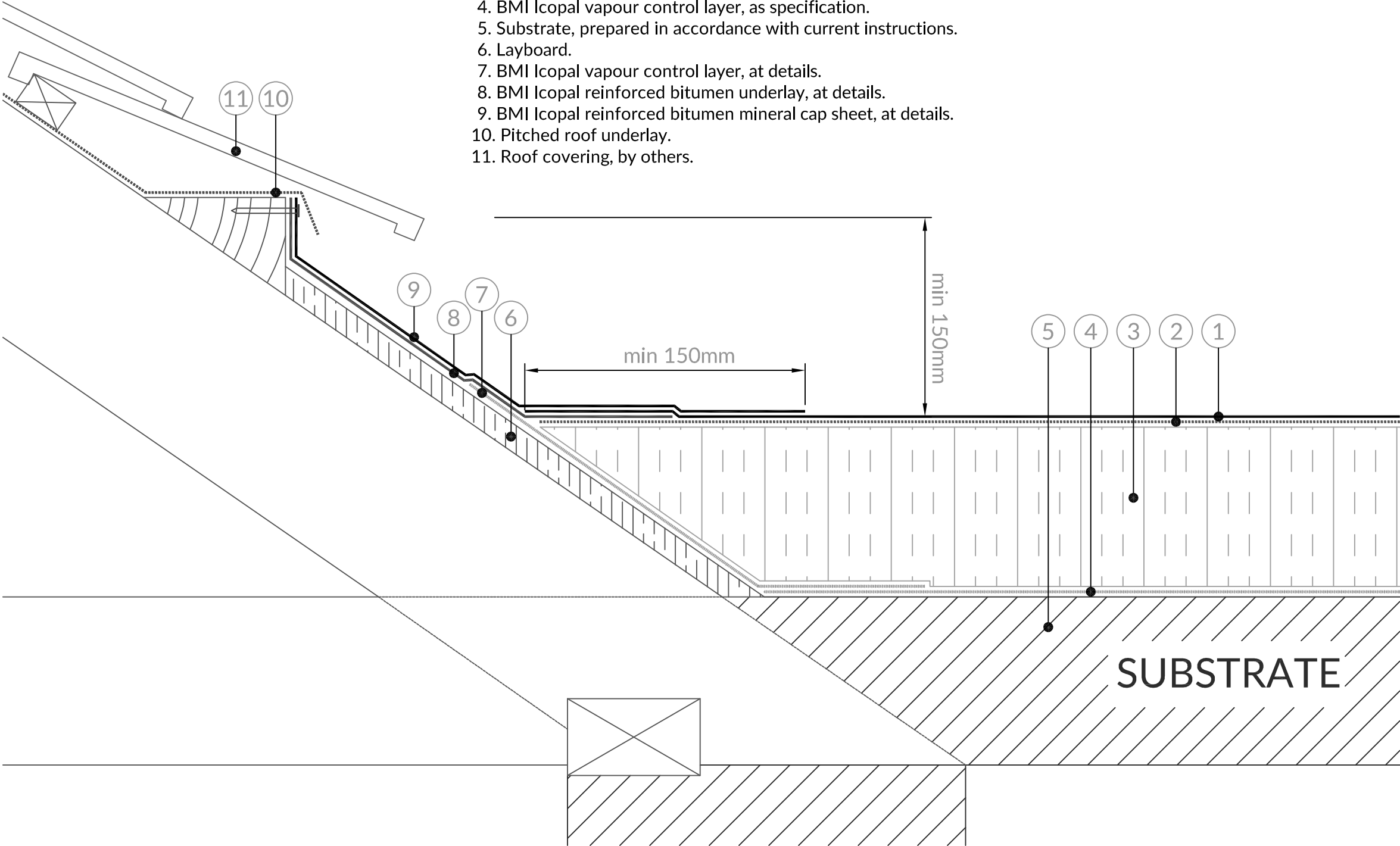


Drawing Title:	Warm Roof To Parapet Wall with Lead Chute			
System:	Reinforced Bitumen Membranes - Two Layer System			
Dwg. No:	T-W-05-104	Date:	16/06/2022	Scale
				NTS

This drawing has been prepared for general information purposes only. This details drawing is to recommend the correct procedure for installing BMi products. All other building details are indicative and are not to be used for building construction. (Do not scale- use figured dimensions only)

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- Notes:
- 1. BMI Icopal reinforced bitumen mineral cap sheet.
 - 2. BMI Icopal reinforced bitumen underlay.
 - 3. Thermazone insulation, as specification.
 - 4. BMI Icopal vapour control layer, as specification.
 - 5. Substrate, prepared in accordance with current instructions.
 - 6. Layboard.
 - 7. BMI Icopal vapour control layer, at details.
 - 8. BMI Icopal reinforced bitumen underlay, at details.
 - 9. BMI Icopal reinforced bitumen mineral cap sheet, at details.
 - 10. Pitched roof underlay.
 - 11. Roof covering, by others.

Notes

Substrate Preparation

i. The substrate is to be prepared in accordance with current instructions and should comply with all current standards. Where a BMI Icopal project specification has been provided these drawings should be considered as part of the project specification and together these take precedence over other instructions. Please consult BMI Technical Department for detailed guidance or queries.

Construction Notes

i. This drawing is intended to demonstrate the recommended detailing of BMI Icopal waterproofing membranes and systems.

ii. Building details shown are intended to be an indication of typical construction only and may vary to actual site and project conditions. Please refer to the principal designer for project details in this regard.

Additional Notes

i. For roofing product references please see BMI Icopal specification where applicable.

ii. Continuity of waterproof covering must be maintained for a minimum vertical height of 150mm above finished roof level, in accordance with the current version of BS:6229, BS:8217 and BS:5250.

iii. Upstands (for reinforced bitumen) of more than 250mm high should be regarded as vertical work, and it will be necessary to mechanically fasten the membrane at the top edge, in accordance with the current version of BS8217. Upstands for single ply and liquid membranes must be terminated as per the BMI Icopal instructions.

iv. BMI Group UK Limited provides this indicative detail in good faith and takes no responsibility for the sufficiency or otherwise of the drawing.



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Drawing Title: Warm Roof To Pitched Roof Abutment

System: Reinforced Bitumen Membranes - Two Layer System

Dwg. No: T-W-10-104

Date: 21/06/2022

Scale

NTS

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Client: Torside Building Consultants Limited
Project: 37 Cross Street Manchester Flat Roof
Project Ref: 10142317



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